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An introduction to the versatile new tube colors and painting medium

PAINTING IN ALKYD

BY WENDON BLAKE

SINCE THE EARLY 1970s, paint chemists have been predicting that the next major development in artists' colors would be alkyd. Writing in *American Artist*, famed color chemist Ralph Mayer said again and again "that artists would hear from the alkyds someday." Now alkyd colors have arrived at last, carrying the label of Winsor & Newton, one of the oldest and most prestigious names in the world of art materials.

But what is alkyd? How does it behave? How do you work with alkyd? How does it differ from other painting media, such as oil and acrylic? And why is alkyd worth trying? This article will attempt to answer these basic questions—and will suggest a series of painting projects to help you discover the wide range of techniques that become possible with this versatile new medium.

ALKYD RESIN

Whether you work in oil, acrylic, egg tempera, watercolor—or alkyd—most of your colors are made of the same pigments. It's the binder that changes. The binder is the liquid "glue" that's blended with powdered pigment to manufacture the thick, colored paste that you squeeze out of the tube—and it's the binder that makes the pigment stick to the painting surface. Each type of paint is actually *named* for the binder, because the binder determines how the paint behaves.

Thus, oil paint is named for the vegetable oil that gives the paint its buttery consistency and slow drying time. In the same way, acrylic is named for the fast-drying, water-soluble plastic that generally gives the paint a consistency like thin cream.

Throughout history, painters have searched for the ideal binder. Soon after the invention of oil paint in the 15th century, artists discovered that various natural resins—sticky, honey-like fluids derived from plants—could be added to the vegetable oil in order to speed drying time, to make the colors more luminous, and to toughen the dried paint film. This is why so many contemporary oil painters normally dilute their tube colors with a resinous medium—usually a ready-made blend of damar, mastic, or copal resin, plus some turpentine or petroleum solvent, and a bit of linseed oil.

The development of alkyd is the latest step in the long quest for the perfect binder. Like the oils and resins used in oil painting over the centuries, alkyd is of plant origin. Working with natural materials derived from plants, Winsor & Newton has extracted a series of chemical "building blocks" and constructed a kind of "ideal" resin that's highly adhesive; pale and transparent; soluble, when wet, in turpentine or petroleum solvent; tough, flexible, and resistant to solvents when dry. Particularly important, alkyd resin dries more rapidly than the linseed oil that's used as the



Fluid Color. Charles Reid dilutes alkyd to a flowing consistency for free, spontaneous brushwork in this detail of a flower painting. Turpentine or petroleum solvent—alone, or in combination with liquid medium—will transform alkyd tube color to a smooth, creamy liquid.



Bold Brushwork. Everett Raymond Kinstler alternates smooth, flowing strokes with rough, impasto brushwork to render the varied textures of rocks, water, and foam in this part of a painting of a mountain stream. Diluted with liquid medium or the lighter of the two gel mediums, alkyd retains the shape and texture of the most rugged brushstrokes.

binder for most oil paints, but more slowly than the plastic resin that serves as the binder for acrylics.

Why the name alkyd? The chemical “building blocks” are mainly alcohols and acids. Hence, AL-CID. The spelling was changed to AL-KYD, because people found it easier to pronounce. It still sounds a bit too much like “acrylic,” but the two media are profoundly different, as you’ll soon see.

ALKYD TUBE COLOR

To manufacture alkyd colors, traditional pigments (like those used in oil and acrylic) are ground in liquid alkyd resin, with just enough petroleum solvent to produce a smooth paste. It’s the resinous binder that creates the special look of alkyd color. Although the appearance of the finished painting naturally reflects the artist’s individual way of handling paint, there is a unique character to the surface of an alkyd painting.

Pure tube color, softened with a touch of solvent, brushes out to a smooth, extraordinarily luminous paint film that bears a striking resemblance to the highly resinous paint of the 17th-century Flemish Masters. At first glance, the colors may seem brighter than other media. This brightness has nothing to do with the pigments—which are all the usual colors you’re accus-

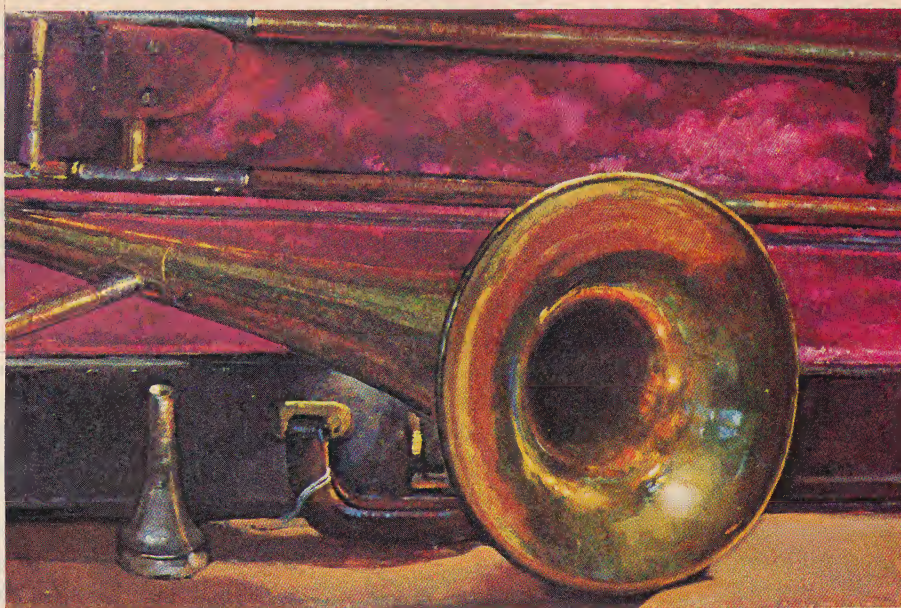
tomed to working with—but is actually the effect of the alkyd resin. It’s as if the paint contained its own varnish. And this makes sense: varnishes like damar, mastic, and copal are resins dissolved in a volatile solvent.

The diluted tube color also dries to a satin sheen that’s consistent throughout the painting surface—not dull in some spots and shiny in others, like too many oil paintings. The brushstroke retains its exact shape, whether you’re working in broad masses of color or precise, linear detail. In fact, alkyd rivals the aqueous media (like acrylic or even tempera) in its ability to render sharp-focus detail. More about this important feature in a moment.

ALKYD PAINTING MEDIUMS

Like oil and acrylic, alkyd is a thick paste as it comes from the tube. You can easily paint with tube color and solvent—as you can with oil color—but you can produce a far livelier consistency by adding one of the three alkyd painting mediums. The standard liquid medium, called Liquin, is alkyd resin plus a fair amount of solvent; this medium will produce creamy color for smooth brushwork, fine detail, and the kind of soft blending that you want in a portrait head. A gel medium, called Win-Gel, creates a soft, pasty con-

Luminous Color. S. Allyn Schaeffer exploits the luminosity of alkyd in this close-up from a still life of musical instruments. In some areas, he blends his colors smoothly; in others, he leaves the strokes unblended to suggest the sparkle of the shining metal.



Stroke over Stroke. S. Allyn Schaeffer captures the flickering colors of leaves in sunlight and shadow by building up a mosaic of strokes, one over another. Because alkyd becomes tacky in a few hours, a fresh layer of brushstrokes can soon be added without disturbing the underlying layer. An alkyd painting is dry to the touch in eight hours, and bone-dry in 18 hours.

sistency that's equally good for rougher brushwork and subtle blending. Oleopasto is a thicker gel medium for impasto painting with brush or knife.

All three mediums are essentially alkyd resin—made in different densities. So, when you add them to your tube color, you're adding more resin and heightening the gloss of the final picture.

SOLVENTS

Alkyd tube color and all three alkyd mediums can be diluted with turpentine or any of the petroleum solvents labeled mineral spirits, white spirit, petroleum distillate, rectified petroleum, etc. These solvents will also remove color from the painting surface on the first day, when the painting is still tacky or merely dry to the touch. But they won't budge the dried color on the next day. At that point, only a powerful industrial solvent will work—and such toxic solvents are best kept out of the studio!

DRYING TIME

The drying time of alkyd color is one of its major advantages. A layer of alkyd paint stays moist and pliable long enough to execute those soft, blended passages that can't be done in a fast-drying, aqueous me-

dium like acrylic. But alkyd becomes tacky or "touch dry" soon enough to overpaint on the same day—which can't be done with oil color. And you have a bone-dry picture the next morning.

Let's look at this timetable more closely. As long as you keep working on a section of a picture—which means brushing on fresh color, medium, and solvent—the paint stays wet. But as soon as you walk away and stop working, the solvent starts to evaporate and the drying process begins. Within three or four hours (in a temperate climate), a paint layer of "normal" thickness will be tacky and resistant to smudging. Within the next four hours, the painting surface will be dry to the touch. At the end of eight hours, the paint can still be softened with solvent. But ten hours later, the paint cannot be removed—the picture is *really* dry. The whole drying cycle is about 18 hours. And the process speeds up if you paint thinly or live in the heat of the tropics.

When you work with alkyd, you'll also notice that all tube colors dry at the same rate. This is a radical departure from oil painting, in which some colors dry overnight, while others can take a week!

The unusual drying cycle of alkyd isn't merely a convenience for impatient painters: it's the key to the

remarkable versatility of this new medium. On the one hand, alkyd is ideal if you're an *alla prima* painter, a direct painter who works quickly and decisively, aiming for a finished picture by the end of a half-day or full-day painting session, indoors or outdoors. On the other hand, if you're a slow, methodical painter, alkyd is perfect for working in a series of stages, gradually building a picture, layer upon layer. An alkyd paint layer is tacky in hours, and you soon make the startling discovery that you can begin overpainting—if you don't scrub too hard—as soon as the underlying color starts to solidify. Most surprising of all, you can paint precise detail in strokes of fluid color *right over the tacky paint*—something that won't work in any other medium. Of course, you can also underpaint one day, then save your glazing and scumbling for the following morning, when the surface is absolutely dry. (If you've tried this in oil, you know that it takes days for the underpainting to dry!)

PERMANENCE

Alkyd resin dries to a clear, transparent, virtually colorless film that minimizes yellowing, resists darkening, and preserves the clarity of the pigment. (Remember the bright, clear colors of the Flemish

Masters, whose highly resinous paint films have lasted so well!) The alkyd paint film is harder than oil paint, but surprisingly resilient, so an alkyd painting will resist cracking, wrinkling, atmospheric pollution, and the sheer physical strain of handling and moving the picture. And because a dried layer of alkyd color is insoluble in turpentine and in the standard petroleum solvents used in the studio, an alkyd painting is easy to clean without marring the paint film.

Like acrylic, alkyd first proved itself as a top quality house paint. Ralph Mayer points out that "alkyd resins have for many years enjoyed a very high reputation as the *crème de la crème* of house paint vehicles, which outlast and otherwise outperform all . . . other materials." Since a wall usually takes more punishment than a picture, this seems to be impressive proof of the durability of alkyd.

Of course, an alkyd painting, like *any* painting, responds to the push and pull of temperature and humidity in the atmosphere. So the old "fat-over-lean" rule applies to alkyd painting, just as it does to oil painting. In any multiple layer technique, the earlier layers should contain less painting medium and the later layers should contain more. Thus, the top layers are most flexible and most resistant to wear and tear.

Color Wash-in. Ferdinand Petrie often begins with a series of thin washes of alkyd color diluted with solvent to a watercolor consistency. The overall color scheme of the painting is quickly established by this wash-in, which is tacky and ready to accept a layer of fresh color in minutes. The artist then completes the picture with heavier strokes.



Glazing and Scumbling. Hank McLaughlin develops the rich colors of this still life by glazing and scumbling one layer of color over another. Alkyd color "sets up" quickly enough to permit glazing over tacky color in just a few hours—and over dry color the following day.

MAKING CORRECTIONS

On the first working day, while the color is merely tacky or dry to the touch, alkyd can be scraped off or dissolved with turpentine or petroleum solvent. You can then repaint immediately. But on the following day, scraping and mild solvents won't work; the paint film is just too tough. However, since alkyd color is bone-dry after 18 hours, it's easy to overpaint and make corrections on that second day.

Rubbing a touch of liquid medium into the dry canvas—a method called "oiling out"—will make the new brushwork more fluent. The correction will also look better integrated with the rest of the picture.

VARNISHING AN ALKYD PAINTING

Since alkyd dries so swiftly, you can apply retouching varnish at the end of the 18-hour drying cycle, and a final coat of varnish can be applied in a month to a painting of "normal" thickness. As in all painting techniques, the best varnish is a soft resin like damar, mastic, or one of the new synthetics that will dissolve easily in a mild solvent like turpentine or one of the petroleum products. When the picture is cleaned with a mild solvent, the soiled coat of varnish comes off, but the tougher alkyd underneath won't dissolve.

COMBINING ALKYD AND OIL COLORS

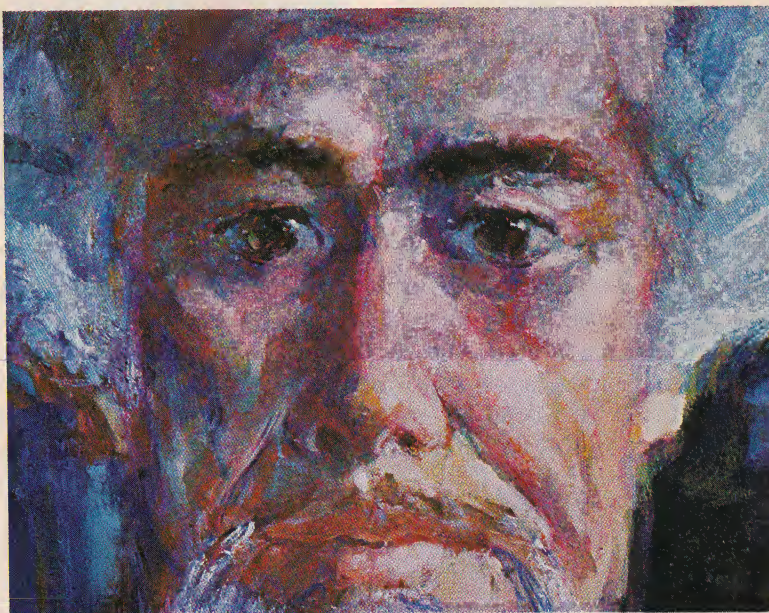
Long before alkyd colors were introduced, the three alkyd painting mediums were successfully used with oil colors—by painters who wanted fast-drying, resinous color. And since alkyd and oil are chemically related, it's theoretically possible to combine alkyd colors and oil colors on the same palette. But mixing the two kinds of tube colors seems pointless, because it means giving up the unique qualities that make alkyd so attractive. All you get is an oil paint that behaves a bit more like alkyd—or vice versa. And it's a lot easier to modify oil paint with alkyd painting medium!

The most effective way to combine oil and alkyd colors—taking full advantage of the unique character of each medium—is to underpaint in fast-drying alkyd, then overpaint in slower-drying oil. Of course, you can add a traditional oil painting medium or an alkyd medium to the oil colors used in the overpainting.

PAINTING SURFACES

Alkyd works well on any surface that's suitable for oil painting: cotton or linen canvas, hardboard, properly seasoned plywood, or rag paper that's isolated with highly diluted shellac, acrylic medium, or acrylic gesso. If you prepare your own canvas or panels—in-

Impasto. Jim Gray piles alkyd color thickly onto the canvas with coarse, irregular strokes to convey the texture of the foam. Thin, fluid strokes render the slender foam trails on the water. Alkyd medium comes in a heavy gel form that is especially suited to impasto painting.



Colored Underpainting. Jan De Ruth often underpaints a portrait or a figure in rich hues that shine through a loosely brushed overpainting of transparent glazes and semitransparent scumbles. Both liquid alkyd medium and the lighter gel medium transform tube color into clear, light-filled glazes and misty scumbles.



Scumbling. Ferdinand Petrie thins his color to transparency and then adds a hint of white to produce a foggy, semitransparent veil that he brushes over the dark forms of the distant fishing shacks. Liquid medium and solvent can be combined to produce varied consistencies for glazing and scumbling.

Opaque and Transparent Color. Ferdinand Petrie combines passages of opaque and transparent color in this detail from a winter landscape. The snow is painted with solid, opaque strokes, while the tones of the distant hillside and the shadowy trees are glazes that retain the texture of the brushstrokes, which suggest the detail of the foliage.



stead of buying them pre-coated by the manufacturer—these absorbent surfaces must be sized, so they won't soak the binder out of the paint. The usual size is an animal hide glue (such as rabbit skin glue), followed by one or two priming coats of white lead oil color, or an oil painting primer made by a good art supply manufacturer.

On a rigid support like hardboard or plywood, traditional gesso (made from hide glue and white pigment) works well, but it's too brittle for a flexible support like canvas. Acrylic gesso is also good for panels, and it can be applied without a preliminary coat of size. But don't use it on canvas; the acrylic gesso is more flexible than the oil or alkyd paint that goes over it, thus violating the "fat-over-lean" principle.

Alkyd will also adhere to plaster and metal, although a polished surface should be roughened first with steel wool or a fine abrasive paper.

BRUSHES AND KNIVES

You can work with any brushes you'd use for oil painting—hog bristle, sable, ox hair, nylon—and the same knives, too. But never allow alkyd to dry on the brush or knife: as you work, rinse your brush in solvent and wipe your knife blade. Don't wait until the end of the

day, when cleaning will take more work, or until the following day, when the job is practically hopeless.

CLEANUP

At the end of the painting day, rinse your brushes in solvent once again; wipe them on scrap paper (such as newspaper) to dry them; lather them in mild soap and lukewarm water (never hot water) until the lather is pure white; rinse them in clear water; and let them dry in the open air. Use a rag moistened with a little solvent to wipe your knives and brush handles clean.

Scrape the palette clean and wipe the surface with a cloth and solvent at the end of the day; if you wait until the following morning, the paint will be difficult to remove. Lather your hands with soap and water, possibly with the aid of a stiff laundry brush that will get under your fingernails. Discard paint-stained rags and scrap paper immediately. Never store them; they're a fire hazard. Air out your studio and hang up your paint-stained clothes to dry—someplace where they won't soil your good clothes. If you get alkyd on a good suit or dress, dry cleaning may not work!

SAFETY

Alkyd requires the same studio precautions as oil



Sharp Focus Detail. Joseph Dawley's precise brushwork takes advantage of one of alkyd's unique handling qualities: as soon as the color becomes tacky, the artist can work over the wet paint layer with crisp strokes of fluid color. Thus, the artist can build up a network of delicate strokes to render exact detail without waiting for the painting to dry.

Wet Blending. Joseph Dawley blends alkyd softly with a sable brush to achieve the subtle gradations of tone in the sitter's face, and the furry texture of his coat. Although alkyd dries quickly, it remains soft and brushable long enough to model the intricate planes and contours of a portrait or figure.



paint. Just work with reasonable ventilation, so the fumes go out the window. Avoid excessive skin contact with colors or solvents. And to avoid ingesting them, don't smoke or eat while you're painting.

PAINTING WITH ALKYD

Once you've bought a set of alkyd colors and mediums, the big question is what to do next. The best way to discover the technical possibilities of any new medium is to plan a series of painting projects. Because alkyd looks so versatile—mainly because of the rapid, but not too rapid drying time—you can try out quite a long list of techniques. To help you dive in and start painting in alkyd, here's a sampling of methods that are worth trying in a series of painting projects. The list starts with the simplest and quickest techniques and ends with the most complex and perhaps the most fascinating.

(1) Begin by trying alkyd in a direct painting—a so-called *alla prima* painting—that you paint in a single day, or maybe a morning or afternoon painting session. After the preliminary drawing on the canvas, start working with your final colors, aiming for the final effect right away. Don't overpaint or build up one layer over another. You'll find that fast-drying alkyd is

excellent for outdoor painting, an art school assignment, or an illustration job—when you're working against time.

(2) Then try a modified *alla prima* technique. Start with a wash-in, just a little color and lots of solvent, quickly covering the canvas with a kind of color sketch that's dry to the touch in minutes. Over this color sketch, work with solid strokes of heavier color, aiming for the final effect in a single session. For *alla prima* painting, use liquid alkyd medium for the solid strokes of color.

(3) A third kind of *alla prima* technique is impasto painting with thick brush or knife strokes. Begin with a simple brush drawing and then go to work with tube color that's modified with gel medium and possibly a touch of solvent to soften the pasty mixture. You can also try impasto painting over a colorful wash-in that's dry enough to paint over in a few minutes.

(4) Now try one of the multiple step techniques that the Old Masters developed. Pick a subject that requires careful drawing and very accurate rendering of light and shade—a portrait or a figure, perhaps—and paint the entire picture in soft shades of gray or grayish

brown, diluting your color with liquid medium and solvent. Over this *grisaille* underpainting—which is dry in 18 hours—paint your colors in glazes, thinned to transparency with liquid medium or with the lighter of the two gel mediums.

(5) After trying glazes on top of a monochrome underpainting, try an underpainting in full color, followed by equally rich glazes the next day. Let the underpainting and overpainting mix in the eye of the viewer: create a green tree by underpainting in yellow and glazing in blue, or a glowing shadow by underpainting in red and overpainting in green.

(6) Having tried impasto brushwork in a one-step painting, do a roughly brushed underpainting, adding just a little solvent to the thick tube color. On the dry underpainting, experiment with dry brush, scraping, glazing, and wiping—using liquid or gel medium. Notice how fluid glazes sink into the rough strokes beneath.

(7) Finally, try the “Magic Realist” technique that’s usually reserved for acrylic, egg tempera, or opaque watercolor. Working with small brushes and fluid color—diluted with liquid medium and solvent—build up your details with intricate strokes. If your color is

thin enough, it becomes dry to the touch almost as rapidly as acrylic. In an hour or less, you can build one layer of precise strokes over the preceding layer. You’ll find that highly diluted alkyd color lends itself to a kind of sharp focus detail that rivals the aqueous media, and is almost impossible when you work in oil. The most precise strokes keep their exact shape, even over tacky color.

KEEP YOUR MIND OPEN

As you explore this new medium, it’s important to remember that you are trying something new. Try to put aside preconceptions and old habits. Resist the temptation to treat alkyd as if it’s just a faster-drying oil color or a slower-drying, easy-to-blend acrylic. Alkyd isn’t an “improvement” over some older medium—oil and acrylic are as good as ever—but is something *different*. Alkyd has its own unique handling qualities, which you’ve got to learn just as you learn to handle oil and acrylic.

This article can give you only a glimpse of the technical possibilities and expressive range of this important new product. There’s only one way to find out what alkyd can do for you: you’ve got to try it with an open mind and a spirit of discovery. Let alkyd surprise you. •



Multiple Glazes. Robert B. Dance brushes one glaze over another—waiting just long enough for the underlying glaze to become dry—to create the transparent tones of water and sky. Applied thinly, alkyd solidifies so quickly that multiple glazes and scumbles can be applied in a single working day.

Magic Realism. Robert B. Dance combines many techniques for which alkyd is ideally suited: multiple glazes and scumbles for luminous lights and shadows; wet blending for the subtle gradations that convey three-dimensional form; and precise brushwork over tacky color to render sharp-focus detail. These handling qualities are produced by the resinous binder in which the tube colors are ground.

